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FISSURES OCCURRING IN LONG BONES; WITH REMARKS ON V-SHAPED FRACTURES OF THE TIBIA.

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THE purpose of this paper is to call attention to fissures, or cracks, occurring in long bones, particularly the tibia.

Although fissures have been described from an early period, modern authors refer to them almost exclusively in the history of cases of ancient date, and show little if any personal familiarity with their phenomena. It appears, however, that certain varieties occur more frequently than has been supposed, and affect especially the above-named bone.

The term "fissure" applies to a line of fracture varying in length, the sides of which are in apposition, penetrating through, or partly through, the solid shaft of a bone, and unattended by the separation of fragments. The statement of Malgaigne, that if a fissure involves the whole thickness of the shaft it must extend to one or the other extremity of the bone, is entirely at variance with facts.

The gravity of this lesion is unquestionable. A force which disrupts, in the most unyielding direction of its fibres, the shaft of an adult long bone, often at a distance from the point where the violence centres, must be powerful enough to cause serious results.

Certain symptoms, under circumstances to be described, justify the opinion that a fissure exists; but the diagnosis is difficult, and sometimes impossible, even when there is a wound of the soft parts.

It is a well-known fact that brittle cylinders tend to break by lines which assume a spiral direction. Any collection of glass tubes will illustrate this point in their broken extremities or the accidental fractures they may have undergone. It will also show that, almost invariably, a crack in the glass extends the spiral a certain distance into the tube, beyond the broken point. The extent to which this principle is applicable to the fractures of bones is still hardly realized, although attention has been called to it by Gerdy, H. Larrey, Houel, and, emphatically, by Gosselin. Fissures exhibit the influence of this law by generally assuming a more or less spiral direction.

Three varieties of crack, or fissure, may be described: —

I. Those unaccompanied by other fracture.

II. Those starting from a fracture.

III. Those accompanied by, but disconnected with, a fracture.

The first variety may be called the true fissure. No example of it exists in the museums of this city. The elaborate article of Poncet[1] admits but three incontestable cases. It occurs so rarely that instances reported have been subjected to searching criticism. Those radiating from bullet-wounds it is claimed should be excluded from consideration. A femur from the museum of Val de Grâce, with an interrupted linear fissure extending nearly the whole length of its anterior surface, figured by Malgaigne, is without history. It has been suggested that in this, as in other specimens without history, the apparent fissures are really "season cracks," and the result of desiccation or weather exposure. That figured by Gürlt (1862) might in fact be called a longitudinal fracture of the humerus, rather than a fissure, so widely separated are the two sides of the cleft. As, however, well-marked examples of fissure are found entirely independent of the lines of co-existing fracture, it would seem very reasonable to conclude that they may occur when no solution of continuity has taken place. The propriety of recognizing the second variety of fissure has also been questioned. Even if it should properly be regarded as but a longitudinal fracture, or at most an eccentric accessory, it still constitutes an interesting form of injury on account of its comparative rarity, and is of great importance from a clinical point of view.

A very perfect instance of this fissure, entitled Crack in the Neck of the Femur, is described and figured by Dr. H. J. Bigelow in his work on The Hip. No illustration can convey an adequate idea of its remarkable extent and elasticity. Starting from a transverse fracture eight inches below the trochanter, it runs spirally upward round the shaft and cervix of an unusually solid and large femur, and "terminates on the under side of the neck, in an S-shaped extremity, an inch from the point where the fissure crosses the inter-trochanteric line in front." It could undoubtedly be converted into a complete fracture with little force. The sides of the fissure are closely in apposition, but can be made to spring apart one eighth of an inch in the neck of the bone, even in the present dry state of the specimen.

The subject from whom this femur was obtained, a man forty-four years old, fell through two stories of a building, and died at the Massachusetts General Hospital eighteen days afterward. The specimen[2] is described in the Catalogue of the Warren Anatomical Museum, as also by Dr. R. D. Mussey[3] and by Professor Hamilton,[4] as well as by Professor Bigelow, in whose practice the case occurred.

Figures 1 and 2 of the accompanying drawings represent another

[1] Nouveau Dict. de Méd. et de Chir., article Jambe, 1874.
[2] No. 1055.
[3] Amer. Journ. of Med. Sciences, April, 1857.
[4] Fractures and Dislocations, 1875.

instance of this variety of fissure. They also represent a typical specimen of what has been called V-shaped Fracture of the Tibia.

The shaft of the bone exhibits a fracture at the junction of its middle and lower thirds, with the pointed and symmetrically V-shaped extremity of the upper fragment (Figure 1, *a*) received into a corresponding vacancy (Figure 1, *b*) in the lower. It will be observed by their relation to the malleolus that these V's involve the internal or subcutaneous surface of the shaft only, and do not trench upon the crest of the bone. The line of complete fracture, at an angle of about forty-five degrees, is uniformly and evenly spiral. From the apex of the V in the lower fragment there starts a fissure (Figures 1 and 2, *c*), continuous with the spiral line of the fracture, winding round the shaft to the perone-o-tibial articulation, and from this point traversing the extremity of the tibia to the base of the inner malleolus. This fissure, at its upper part, is joined by a second, beginning on the opposite side of the bone at the fracture (Figure 2, *d*), and circumscribing quite a large fragment, which, however, rests firmly fixed in place.

The patient from whom this specimen came was an intemperate woman, aged thirty-seven. The tibia was broken at its lower third, and the fibula at a point further down. There was no external wound, and but little displacement. Great swelling ensued, followed by abscesses and gangrene. The tibia protruded in front of the leg, and the fibula at the ankle. The constitutional symptoms were severe, and for a time the patient's life was in danger. She entered the Massachusetts General Hospital thirteen weeks after the accident, and I performed amputation through the middle of the leg. A good recovery followed.[1] The specimen is preserved in the Warren Museum.[2]

Figures 3 and 4 illustrate the third variety of fissure. They are taken from the tibia of a man, aged forty-one, admitted to the Massachusetts General Hospital [3] for compound fracture of the left leg, caused by the kick of a horse. I amputated the limb high up, a few hours after the accident, and a fatal result followed at the end of a week. The specimen is in the Warren Museum.[4]

The continuity of the bone is destroyed at two points. At its upper part by a spiral fracture, in the lower fragment of which a fissure (Figure 3, *b*) will be seen continuing the line of the break to a transverse and dentated fracture (Figure 3 and 4, *c*), where its further course is arrested. A second fissure (Figure 3, *d*) extends downward more than an inch from the last-named fracture.

The interesting feature of this specimen, however, is a series of radiating fissures at the lower part of the tibia (Figures 3 and 4, *e*), diverging in all directions, varying in depth, and opening and closing

[1] Records, vol. cxlii. p. 167.
[2] No. 3689.
[3] Records, vol. clxx. p. 61.
[4] No. 4740.

if the bone is twisted. This complex fissure has no connection with the fractures, its nearest approach being two inches distant. None of its lines encircle the shaft. They are confined to one half of its circumference, but can be traced longitudinally two and three quarters inches.

Figures 5 and 6 illustrate both the second and third varieties of fissure. They represent the tibia of a man who, in September, 1872, while suffering from delirium tremens at Deer Island Hospital, jumped from a window, ten feet above the ground, receiving a compound fracture. The knee-joint was also opened. I amputated at the articulation, a few hours after the injury, and the patient died twenty-four hours later.

The specimen, which was presented to the Warren Museum[1] by Health Commissioner S. F. Durgin, M. D., physician of Deer Island Hospital at the time of the occurrence, is described in the catalogue as follows: "In the upper half of the bone is a long, oblique fracture, having a sharp-pointed termination upon the crest of the tibia (Figure 5, *a*), at about its middle. A fissure (Figure 6, *b*) extends downwards nearly to the lower end of the bone, upon its outer face, and straight in its direction, but disconnected with the oblique fracture. Another fissure (Figure 5, *c*), of equal length, also linear in direction, descends on the internal surface of the bone, starting from the fracture of the shaft." A transverse section of the tibia shows that both fissures involve the entire thickness of the parietes of the bone.

The three specimens figured (all of which have been drawn by the accurate hand of Dr. H. P. Quincy), together with that of Professor Bigelow, to which allusion has been made, exhibit the co-existence of fissures with fractures, especially with those assuming a spiroidal direction. They present instances of spiral, of linear, and of irregularly shaped fissures, and also of fissures entirely disconnected with the lines of accompanying fractures. But no one surpasses in interest that which Figures 1 and 2 illustrate, namely, a fissure extending to the ankle-joint in connection with a V-shaped fracture of the tibia.

This form of fracture was first described by Gosselin.[2] It has an anatomy of fixed and absolute character, yet it has failed to attract the attention which its peculiarity and importance claim. Although French and German authors speak of it with more or less detail, no English or American work, so far as I am aware, makes any allusion to its existence.

At first sight there is little to distinguish a V-shaped fracture of the tibia from a common oblique fracture. In the latter the projecting point of the upper fragment is usually very sharp, and belongs to the crest of the tibia. In the former it is broad, never in the crest, but

[1] No. 3909.

[2] Gazette des Hôpitaux, 1855.

always in the internal, subcutaneous surface of the bone. The two sides of the point are of equal length, and are received into an open V in the lower fragment. The line of the fracture is invariably a spiral one, and the names "spiral" and "spiroidal" have been applied to it. But these have been objected to because they characterize nothing peculiar to this injury; whereas the term "V-shaped" designates that feature of the fracture, recognizable through the integuments, which reveals an important lesion that would not be suspected if this indication were wanting. Whenever this V is observed, there are always present: 1st, a serious disturbance of the medulla; and 2d, a fissure, starting from the apex of the V, winding spirally around the shaft, and extending to the articulating surface of the tibia, which it traverses. This fracture, therefore, is distinguished from all others by its stereotyped features, and the constant accompaniment of a fissure down to and into the ankle-joint. These characteristics are so unfailing that it is said, if you have seen one specimen you have seen all ("qui a vu l'un a vu l'autre"). The illustrations representing this fracture offer a striking uniformity. Gosselin, Follin, A. Richard (who gives four figures on one page), and the Nouveau Dictionnaire de Médecine et de Chirurgie, reproduce almost identical outlines. It usually occurs at the union of the middle and lower thirds of the bone. The fibula is commonly, but not always broken. The mechanism of its production is a matter of dispute. The splitting of the lower fragment by the wedge-shaped upper one, and the crushing of the medulla, resemble the well-known phenomena of impaction.

The specimens figured show, however, that a V-shaped fracture of the tibia is not the only one attended by prolonged fissure. Thus, in a common oblique fracture of the tibia, represented by Figures 5 and 6, the apex of the upper fragment being at the crest, there is a fissure, linear and not spiral, in the thin parietes of the shaft, which does not continue the line of the main fracture. Figures 3 and 4 represent a fracture high up in the tibia. The fissure which starts in the lower fragment is arrested in its progress by an intervening transverse fracture. Other fissures, disconnected with and below this fracture, extend their irregular outlines to the lower portion of the bone.

The conclusion to which we arrive is, therefore, that a fissure may exist undetected; but if, in a broken leg, the fracture is upon the internal, subcutaneous surface of the tibia, and its upper fragment reveals a broad and short V-shape, then the presence of this additional lesion may be safely assumed. Under these circumstances a tender and sensitive shaft, or a swollen and stiff ankle-joint have great significance, and lead to the suspicion of grave injury.

The peculiar shape of the broken bone in a V-shaped fracture makes it a matter of difficulty to keep the upper fragment in position. Slough

by pressure not unfrequently happens, and the simple fracture becomes compound, both fracture and ankle-joint being opened to the air. As a rule, a fatal result then takes place. Contusion of the medulla is quickly followed by suppurative osteo-myelitis if the air has access to it. The products of putrefaction in the oil of the medullary cavity appear to be specially deleterious, and provoke blood-poisoning with great rapidity. Fatty emboli, in a putrid state, have been repeatedly found in the lungs of patients who have died from V-shaped fractures. On the other hand, it may be kept in mind that the general prognosis is less serious than some of the early observations seemed to indicate. In spite of long delay, recovery often takes place in cases uncomplicated by a wound, leaving, however, a degree of stiffness in the ankle greater than usually occurs from the mere vicinity of a break.

Amputation is indicated whenever this fracture, at the time of the accident, or, at a later period, becomes compound. Gosselin, in his first paper, remarked that "he was almost disposed to say the complication of a wound was a piece of good fortune, since it spurred the hand of the surgeon, and made obligatory the amputation, which alone could save the patient's life." Verneuil states that he lost all the patients with compound V-shaped fractures whose limbs he tried to save, while two out of three amputations were followed by recovery. Poncet says that at the Military Hospital of Strasbourg three V-shaped fractures with wounds, but without much apparent injury, and which seemed to justify attempts at conservation, proved fatal. My own experience, limited to two cases, corroborates these observations.

A degree of irregularity of union attends the permanent consolidation of these fractures. Contrary to the general rule, by which the foot inclines to turn outwards, the foot here turns inwards. If the patient, lying down, is asked to put his feet side by side, he does so only by turning the knee and thigh outwards. Nor can he put his knees side by side except by turning the foot and lower part of the leg inwards. This distortion may be absent at the time of the injury, or, if present, is readily obviated; but, during treatment, the upper fragment of the tibia, and the thigh, little by little, rotate outwards, until, when noticed, the deformity is permanent. This result is stated to occur only in connection with a V-shaped fracture of the tibia. I have never verified this observation, but, if correct, it calls attention to a tardy diagnostic sign, which may throw light upon a protracted case, and moderate too sanguine expectations of speedy recovery.

Persistent pain often follows what may be called "recovery" from a V-shaped fracture. I have seen two instances where the contour of the united bones, together with the symptom just spoken of, led me to diagnosticate this injury. A deep-seated inflammation of bone, or of the periosteum, does not always betray itself by external signs; but

a lingering soreness in the tibia, especially if accompanied by pain and stiffness in the ankle-joint, may, in view of the facts here enumerated, find its explanation in the existence of this peculiar fracture.

ON THE TREATMENT OF THE CHANCROID.

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I AM aware that the subject of this article will seem to many of little interest and of slight importance, but as chancroids are by no means uncommon, and, except in the large medical centres, must come under the treatment of the general practitioner, and as the conclusions to which my experience in treating a large number of cases forces me are diametrically opposed to those generally received, taught, and practiced, and moreover as these conclusions, if correct, will save patients considerable pain, not to mention other advantages to be referred to hereafter, I have thought that perhaps a small part of the space in the JOURNAL might for once be taken from matters of more general interest.

By chancroid I mean the soft chancre as distinguished from the hard or indurated, the local venereal ulcer, or simply the chancre, as the modern German school has named it, arguing, with justice, that the term chancre, even when qualified by the adjective indurated, is not properly applicable to the primary syphilitic lesion, as this often consists simply of an indurated papule with the slightest erosion, and sometimes of the induration alone, with absolutely no lesion of continuity.

This ulcer of which we are treating has certain well-marked characteristics; it always results from direct contagion from an ulcer of the same nature, the only factor necessary for its genesis being the absorption of some of the secretion of such an ulcer by the skin or mucous membrane; it has an apparent period of incubation, varying from a few hours to several days; it begins as a small pustule, which is soon broken, and the base of which is seen to consist of a minute ulcer. This gradually spreads, circularly or elliptically when on a smooth surface, but is apt to follow the direction of any depression or fold in which it may happen to be situated, as in the sulcus at the corona, or in a fold of the mucous membrane of the anus; its edges are sharp cut, as if with a punch, and its base is covered with a dirty, yellowish-gray, pultaceous deposit which cannot be wiped off; and it secretes a purulent fluid which, inoculated on the patient or on another person, will reproduce an ulcer of the same sort. Having gone on increasing in size, more or less, according to circumstances, but usually not extending as deep

as the subcutaneous tissue, for the space of from four to six weeks, the base begins to clean up, and gradually takes on the appearance of a healthy granulating wound; the spreading at the periphery stops, and then the process of healing begins and proceeds exactly like that of any lesion of continuity of the skin caused by a burn or cut, and results in a cicatrix of fibrous tissue such as is always formed when the matrix of the skin, that is, the papillary layer, has been destroyed. In a certain number of cases, variously estimated by the writers on the subject, but according to the average estimate in about one case out of three, this ulcer during its course is complicated by an acute adenitis of an inguinal gland, sometimes on each side, which may result in suppuration. This adenitis may be either sympathetic, like that in the axilla after a bruise of the finger, or it may be due to the actual absorption of the virus of the ulcer by the lymphatics. This virus is arrested at the first gland with which the lymphatic vessels connect, and there sets up its specific inflammation, resulting in an abscess, which opens, and the pus from it possesses the specific property (the power of reproducing a similar ulcer when inoculated) of the chancroid.

Such is a very brief description of this affection, which, it will readily be admitted, is one *sui generis*, having many marked individual characteristics, in the combination of which it differs from all other known forms of ulceration. From the anatomical situation of this ulcer, namely, on the external integument or mucous membrane, and the consequent ease with which it can be watched and studied, and from the fact of the possibility of its artificial reproduction by inoculation, it would be supposed that its history, course, pathology, and treatment would have been thoroughly investigated, and such is the case. Many able and careful observers have worked in this field, and the many inoculations made, either to settle the question of differential diagnosis between this disease and the syphilitic lesion, or during the investigation of the subject of syphilization, reaching in a case of Danielssen, of Christiania, the enormous number of four hundred on one patient, have resulted in a thorough knowledge of the ulcer from the moment of its first appearance to the end; and there are few subjects in medical science on which there is such perfect unanimity of opinion, with the exception of some differences in abstruse points of causation and specific nature which exist between the followers of the belief in the unity and those who believe in the duality of the virus, the former, however, being now reduced to a very small number of adherents.

With regard to treatment, even the believers in unity are in accord with the rest of the world, and the treatment universally taught is cauterization. By cauterization is not meant touching the ulcer with a crayon of nitrate of silver, but actual, destructive cauterization, for which purpose the whole arsenal of the strong acids, and caustic pastes, and even the actual cautery, have been recommended and used.

The theory of this treatment is that, as the chancre secretes a specific virus and shows a specific tendency to progress by the ulcerative process, by destroying the base and edges thoroughly we substitute for the specific sore an ordinary solution of continuity, which will show a tendency to repair by the usual process of granulation. And such in point of fact is the result generally when the cauterization has been properly done; when the resulting eschar comes off, the base looks healthy, and the process of granulation soon starts up. In some cases, however, the cauterization has to be repeated once or more before the ulcer loses its specific character. While all authorities admit that the chancroid as a rule is a self-limited disease, that is, that after a certain time it will, unless phagedæna sets in, stop spreading and gradually heal, it is claimed, and experiments seem to justify the claim, that the time required is from six weeks upwards, a period which is decidedly shortened by the caustic treatment.

Such being the case, what objections can be urged against this treatment?

In the first place it is quite painful, not so much so when there is one small chancre only; but when the ulcers are multiple, as they are apt to be, the pain may be very severe. It is true that we can use ether, but it must be remembered that giving ether in a hospital, where assistants and all the necessary adjuvants are at hand, is a very different thing from giving it in the physician's office. I hold that no patient should ever be etherized by a physician alone, and as most of these cases are treated in the office it would be necessary to call in an assistant. Much time is consumed, to say nothing of the liability to vomit and the very probable chance of the sphincters relaxing during or after the operation. Moreover, although we appreciate the great blessings of ether, it is often far from agreeable to take.

Secondly, the thorough cauterization of a chancroid is followed by considerable inflammatory action, and especially if it be on the prepuce, by œdema and swelling. Now in those patients whose prepuces are long enough to cover the glans the cauterization of chancroids on the glans and on the inner fold of the prepuce will cause enough swelling to produce an artificial phymosis, and thus we shall lose the great advantage which we have in treating an external lesion to which topical treatment can be applied.

Thirdly, the inflammation produced by the caustic is apt to cause an induration of the surrounding tissues, which it is sometimes impossible to tell from the specific induration showing constitutional syphilitic infection, and in this way we obscure our means of diagnosis on a point which is of great importance to the patient.

Fourthly, the bubo which we find in a certain number of cases of chancroid may be either specific, caused by the actual absorption of the

virus, or it may be what we call sympathetic, that is in some way due to the irritation at the seat of the ulcer. Now in the latter case it would seem that anything which increases the irritation must increase the chance of a bubo, and such I think is proved to be the fact by experience. I have no statistics to back the statement, but I feel sure that the percentage of co-existing buboes is greater in cases where thorough cauterization has been used than in those that have been treated in a milder way.

These four possible results of cauterization, namely, pain, swelling and phymosis, masking the diagnosis, and the greater frequency of sympathetic buboes, are surely, if correct, enough to induce us to employ some other treatment if we can find one that will be as effectual. Without giving exact statistics, I am confident that I am understating the number when I say that during the last two and a half years I have treated, at the dispensary and in private practice, five hundred cases of chancroid, and that I am overstating when I say that in that time I may have used actual or destructive cauterization in a dozen cases.

The treatment that I have adopted, wherever possible, is the use of iodoform, and with very good results. I will merely speak of three cases, the data of which I take from my private case-book.

A patient who had been under treatment for five weeks for a chancroid, which had been burned with nitric acid about three times a week, and which nevertheless continued to increase slowly, was sent to see me for consultation. The ulcer had attained the size of a thumb-nail. In one week of dressing with iodoform it was entirely healed.

In another case of four weeks' duration there were seven chancroids about the glans and prepuce, one of which had eaten through the frænum. These also were all healed in one week.

The third case is under treatment at present, having reported on December 14th. The patient came to me November 28th, with a series of chancroids in the furrow of the glans, which practically amounted to one surrounding the whole glans, and with seven others on different parts of the prepuce and glans itself. They were of only four or five days' duration and had received no treatment whatever. There was so much inflammation and redness of the prepuce, which was quite long, that it was with great difficulty that it could be retracted, and I am sure that any caustic applied would have made a phymosis that would have defied local treatment for at least a fortnight. On December 14th, the sixteenth day, the chancroids were all perfectly healthy granulating ulcers, and a swelling of an inguinal gland which had started up had gone down so much, that I removed the restriction with regard to exercise which I had placed on the patient.[1]

[1] On the 21st there was only one spot about the size of a pin's head that had not healed, and the patient was discharged.

I do not mean to say that these are three average cases, but I do mean that the duration of the disease has been less and the frequency of suppurating buboes decidedly less also than when I treated such cases by destructive cauterization. So sure am I of this fact that I have for some time been seeking to discover the why and the wherefore.

It does not seem possible that the large number of syphilographers in the last generation who have treated this subject experimentally should have accepted the fact that cauterization was necessary, when such was not the case. Begging the question with regard to the correctness of my conclusions, and assuming that I am right in saying that at present, in the great majority of cases, chancroids will heal in from one to three weeks without cauterization, the other possible alternative is that the character and virulence of this lesion has changed. This opens a vast field for speculation and study, with regard to the nature of which I will merely offer the following hints. The experiments in syphilization have shown that by repeated re-inoculation of chancroidal virus it gradually loses its power to reproduce a chancroid, and that a time will come when the pus secreted from the resulting ulcer has nothing to distinguish it from ordinary pus. Now admitting that every chancroid is the result of contagion from another, in other words that every chancroid has a parent, and estimating the average life of a chancroid from the time of its birth to the period when it gives being to another at one month, which is certainly a long interval, — admitting these statements I say, any chancroid that we see to-day, must have been the result of two hundred and forty inoculations in the past twenty years.

Clere takes the ground that the chancroid, although a local disease, owes its being to the fact of the syphilitic virus being inoculated in somebody who had already been syphilized, and under the circumstances it merely produces an ulcer, which, in turn, can only reproduce a local lesion.

Bumstead admits that there may be some truth in this theory. If there is, may not the fact that syphilis is quite prevalent among people who have chancroids explain the still greater modification of the virus, so that it may gradually lose its power of even producing a virulent local disease? But these are mere hints of the train of argument and study that might be followed. In point of fact I have not seen, in the ten years during which I have been in practice, one single case where a chancroid has caused a sufficient loss of tissue to leave a deformity, whereas I do quite often see cases where a considerable part of the glans or prepuce has been destroyed by chancroids which existed twenty or thirty years ago. But to return to the point which I wish to discuss. I have found that the great majority of cases of chancroid do well without destructive cauterization. I am aware that it will be said, and with truth, that some of these cases may not have been chancroids, but irri-

tated abrasions, or herpetic ulcers, which would have got well if they had been let alone. Such cases, however, were certainly so few in number that they need not be taken into account. My attention was first called to the fact that chancroids would do well without cauterization by happening to have several cases under my care at the same time about three years ago, in which the existence of a phymosis, in some cases congenital, in others the result of inflammatory action, made it impossible to treat them by cauterization, and yet in time they all got well; and in those cases where the phymosis subsided the loss of tissue was not noticeable. The time required was from four to eight weeks. From the amount of pus, swelling, etc., in three of the cases at least, I was in great doubt as to whether I should not slit up the prepuce in order to be able to cauterize, and thus put a stop to the spreading of the ulceration, and had the tide not turned when it did, should have done so in one case certainly. Since that time, I have not used cauterization in more than a dozen cases. With regard to the use of iodoform, I hardly dare to claim for it a specific action in causing chancroids to heal quickly. No one can be more on his guard against the "post hoc, propter hoc" line of reasoning, and I regret to say that my faith in specifics is very small, or rather confined to very few; but on the other hand, when I have seen sufficient proofs that certain drugs do act in a certain way, and there is nothing in what I know of physiology, histology, or pathology to prove that they cannot act so, I believe that they do. For example, I never believed that iodide of potassium could cure an aneurism when the sac was once formed, nor that the chlorate of potash could cure an ovarian dropsy when the cyst was developed, although asserted by those to whose experience and judgment in most things I defer; but I not only believe, but know, that a mercurial, properly administered, will hasten the clearing up of secondary syphilitic symptoms, that iodide of potassium will cause a gummy tumor to be absorbed without breaking down and suppurating, and that a mixed treatment of the two will heal in two weeks a venereal ulcer that has been slowly spreading for months. In the same way I know that iodoform will in most cases cause a chancroid to heal in a very short time. It is not the only thing under the use of which it will heal, as I have tried, with success, black wash, astringent lotions, mercurial ointment, etc., but the difference in time is very decided. Nor are chancroids the only ulcers on which iodoform seems to have a marked curative influence, as I was led to try it by having had an epithelial ulcer heal very quickly after this drug was used as a dressing. The cure in this case, however, was of course only temporary. It may be used either pure, as a powder, or made into an ointment (℥i—℥i). The former is best where the ulcer is excavated, or the edges raised, as it can be sprinkled into the hollow places formed; the latter, when the

ulcer is not deep, so that when spread on lint the ointment can touch the whole of the sore. There is only one objection to the use of iodoform, and that is quite a serious one, namely, the very powerful and penetrating odor with which it is endowed. Patients who are using it constantly hear the persons they are thrown in contact with complain of the gas leaking, etc. By care, this may be somewhat modified by putting dry lint over the powder when that is used, and by using a larger piece of lint than is necessary to cover the sore when the salve is the medium employed, and by carefully washing the hands after renewing the dressings. Although in most cases the use of iodoform will succeed, there may be need of having recourse to the classical treatment of cauterization, and in this case the selection of the caustic to be used is a matter of importance. For thorough and quick destruction of the tissues to which it is applied there is nothing so potent as pure bromine. It causes an instantaneous dry eschar, about a line in thickness, which on the third or fourth day falls off and discloses almost always a red healthy surface. It is, however, difficult to apply, as if too much is used it runs like liquid fire, shriveling up the tissues that it comes in contact with; moreover, the fumes are very irritating, and if inhaled while making the application will most effectually distract the surgeon's attention from his work to himself. It is best applied by means of a pipette or by a solid glass rod drawn out to a point. Another objection to its use is that it is not always easy to obtain. Fuming nitric acid I have found to be the next best caustic for this purpose, although the eschar formed is not nearly so thick. After applying it thoroughly, dry lint should be used as a dressing until the eschar comes off. Under no circumstances should nitrate of silver be used as a caustic in the treatment of chancroids. It can do no good and may do harm. Unfortunately, with many physicians the routine practice seems to be, if they see an abrasion, or a tear, or an ulcer on the penis, as to the nature of which they are in doubt, to touch it with caustic as a preliminary step, and wait for further development. Later, the solid stick may be used with great benefit, if after the chancroid has lost its specific character it has become a simple indolent ulcer, but the use of the nitrate then is to stimulate, not to destroy.

On reading over what I have hurriedly written, I see that I may perhaps have laid myself open to the charge of claiming originality in the views expressed. Nothing could be further from my thoughts. I have no doubt that many other observers have noticed that chancroids heal without the use of caustics, and I know that iodoform has been used in their treatment. Indeed, Bumstead mentions incidentally, concerning the subject of phagedænic chancroids, that he has used it with good effect, but nevertheless, as the fact remains that in all text-books cauterization is laid down as the rule, and as in the periodical literature that

has come under my eye I have seen no other view advanced, and as I am convinced that in ninety cases out of a hundred, at the very least, it is not only unnecessary but injurious, I have attempted to give my grounds for this conviction.

RECENT PROGRESS IN MEDICAL CHEMISTRY.[1]

BY E. S. WOOD, M. D.

Copper. — MM. Bergeron and L'Hôte [2] have made a series of analyses for the purpose of settling the question as to the amount of copper normally present in the human body. About one half of the liver and one kidney were taken for analysis in each case. In two individuals seventeen years of age, copper was detected, although its amount was not estimated; in eleven persons aged from twenty-six to fifty-eight years, between 0.0007 and 0.0010 grm. was found in each case; and in one aged seventy-eight years 0.0015 grm. was detected. Copper was also found in six fœtal livers. They conclude, therefore, that copper is always present in appreciable quantity in the liver and kidneys, and they do not think that the amount of copper in the whole liver and kidneys ever exceeds two and a half to three milligrammes, and in most cases does not reach two milligrammes.

These gentlemen made the analyses of the organs of the two females in the "Moreau" poisoning case, and found in the liver an amount of copper corresponding to 0.119 grm. of the sulphate of copper in one case, and to 0.084 grm. in the other. They stated, therefore, that since so large an amount of copper was found, and because the symptoms were not inconsistent with acute copper poisoning, and a careful post-mortem examination failed to reveal a natural cause for death, a compound of copper must have been the cause of death.

L. M. V. Galippe [3] takes exception to the above conclusions of Bergeron and L'Hôte, and considers that an expert has no right to state that death has been produced by copper poisoning when such small amounts as the above are found, since much larger quantities have been detected in cases in which death has been due to natural causes. Thus MM. Bourneville and Yvon [4] found in the liver of an epileptic, who had during life been treated with the ammonio-sulphate of copper, and had taken forty-three grm. of this compound, 0.295 grm. of metallic copper, which corresponds to 1.166 grm. of the sulphate of copper, although the patient had taken no copper compound for three months before death. Yvon found in the liver of another person, who had

[1] Concluded from page 15.

[2] Journal de Chimie médicale, March, 1875, page 115.

[3] Étude toxicologique sur le Cuivre et ses Composés, Paris, 1875.

[4] Journal de Chimie médicale, May, 1875.

been treated during life with copper compounds, 0.236 grm. of metallic copper; Rabuteau found 0.239 grm., and Galippe himself found 0.310 grm., 0.220 grm., and 0.120 grm. of metallic copper in different cases.

From experiments upon animals and men, Galippe concludes that (1), except in cases of suicide, acute poisoning by compounds of copper ought not to be possible, both on account of the horrible taste which these compounds have, and on account of their emetic property, which causes the expulsion of the poison; and (2) poisoning of a mild grade is impossible, since according to his experiments upon animals, when small doses are given, tolerance of the system for the copper compound is established without any injurious influence upon the health.

Arsenic. — C. Husson[1] has made some experiments on the analysis of arsenic especially with a view to its detection in wines to which arsenical aniline colors have been fraudulently added. He finds that chemically pure fuchsine is innocuous, but that a large proportion of that made at the present time contains a minute amount of arsenic. The arsenic in fuchsine, or wine colored with fuchsine, is estimated by converting it to arseniuretted hydrogen in a Marsh's apparatus, and passing this gas through a standard solution of iodine in benzol.

The method of procedure is as follows: After decomposing the material and converting the arsenic to potassic arsenite or arseniate by the ordinary methods, the residue is dissolved in a little water, and the solution divided into two parts, one for the qualitative and the other for the quantitative analysis for arsenic. If arsenic is detected in the first portion, the other is introduced into a Marsh's apparatus, and the gas after passing through a drying tube is conducted through a succession of test tubes which contain varying but known amounts of iodine dissolved in benzol, and the amount of arsenic is calculated from the amount of the standard iodine solution which is decolorized.

The solution of iodine recommended is one which contains 0.10 grm. of iodine in 100 cub. cent. of benzol. The author finds that 0.01 grm. of arsenious anhydride transformed into arseniuretted hydrogen is decomposed by 0.02 grm. of iodine.

Phosphorus. — In the last report[2] some experiments upon animals were mentioned, which were made for the purpose of determining the length of time which must elapse before free phosphorus entirely disappears from the animal body in cases of poisoning. A case of phosphorus poisoning in a human being, which has an important bearing upon this question, is reported in detail by Dr. V. Elvers.[3] In this case free phosphorus was detected in the stomach and intestines eight weeks after death. The patient died on November 7, 1862, and the

[1] Journal de Pharmacie et de Chimie, October, 1876, page 294.

[2] The JOURNAL, July 13, 1876, page 36.

[3] Vierteljahrsschrift für gerichtliche Medicin, July, 1876, page 25.

body was buried. It was exhumed on December 19th. In performing the analysis for the metallic poisons it was noticed that, upon destroying the organic matter in the stomach and intestines and their contents in the ordinary way by hydrochloric acid and potassic chlorate, there were flashes of light such as are produced by free phosphorus. Upon performing Mitscherlich's test for free phosphorus with these organs on January 4th, the ordinary phosphorescent light was seen, and in the distillate from a part of the stomach and intestines with their contents there was obtained an amount of phosphoric acid corresponding to 0.0157 grm. of phosphorus, which calculated for the whole stomach and intestines gave 0.094 grm. as the amount of free phosphorus existing in those organs eight weeks and two days after death. No free phosphorus could be detected in any of the solid viscera.

Mercury. — O. Kalb [1] mentions a fatal case of chronic mercurialismus, in which the tremor was so great that the patient could not walk or feed himself. After a few days in the hospital a condition of collapse occurred with a temperature of 43° C. (109.4° F.) in the rectum. Death took place on the following day. The autopsy revealed only moderate hyperæmia of the brain, and commencing pneumonia in the lower part of the right lung. Chemical analysis showed the presence of a large amount of mercury in the lung, but none in the brain, liver or bones.

Poisoning by Nitrous Fumes. — A. Tardieu and Z. Roussin [2] report a fatal case of poisoning by inhaling nitrous vapors. A workman employed in dressing morocco, during the preparation of one of the solutions used in the process, which was made by dissolving metallic iron in nitric acid or in a mixture of nitric and hydrochloric acids, inhaled some of the fumes arising from this mixture, and was found lying upon his back in the room, the air of which was strongly impregnated with the acid vapors. Death took place a few hours after. There was found upon post-mortem examination inflammation of the endocardium and almost complete destruction of the lungs. The lung tissue was so much softened in many parts that it had the consistency of a jelly; some portions of the left lung, where the normal structure was preserved, were much congested, and assumed a yellow color on being washed with a stream of warm water. The lung tissue and the bloody fluid which it contained had a strong acid reaction to test paper, and evolved an evident nitrous odor when a fresh section was made through the tissue with a knife.

Chemical analysis detected a large amount of free nitric acid in the lungs, so that there was obtained 1.41 grm. of sodic nitrate crystals, with which all of the tests for nitric acid were obtained. The acid could not be detected in any of the other organs.

[1] Centralblatt für die medicinischen Wissenschaften, 1876, No. 40, page 719.

[2] Annales d'Hygiène, October, 1875, page 345.

Brucia. — A. Flückiger [1] uses as a reagent for brucia a solution of mercurous nitrate, which does not at the ordinary temperature produce an orange color, as does free nitric acid, but upon warming gently over a water bath a beautiful carmine color is formed, which becomes deeper and deeper, and is very lasting. The red solution may even be evaporated to dryness without destroying the color. This is by far the best color test for brucia, since all of the others depend upon the production of passing colors.

This reagent does not have a similar action upon strychnia, so that brucia may easily be detected in the presence of strychnia, even if it exists in the proportion of only one part of brucia to ten or twenty of strychnia. The alkaloids of cinchona and opium, veratria, caffein, and piperin are not colored by the mercurous nitrate solution. It produces a somewhat similar color with albumen and carbolic acid, but these substances are not at all liable to be mistaken for brucia in a legal analysis, since they would be separated by the processes used for isolating the brucia, and, moreover, the red color produced by carbolic acid quickly changes to a brown.

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MAY 13, 1876. The president, DR. HODGDON, in the chair.

Imperforate Hymen; Accumulation of Menstrual Fluid; Operation; Recovery. — DR. WINSOR, of Winchester, read the case, which will be published in a future number.

DR. WINSOR, in answer to questions, stated that the strength of the solution of bromo-chloralum used for injection in the case reported was one part to ten of water.

DR. CHADWICK asked if the experiment had ever been tried of treating the cavity by injecting it, immediately after complete evacuation, with an antiseptic fluid, and retaining it there till forced out by the tonic contraction of the parts involved in the dilatation. It is well known that all cases do more or less poorly after the operation from the septic influence of the decomposing fluid.

DR. LYMAN remarked that one of the later writers had suggested free incision and immediate and complete washing out of the contents of the cavity, as involving no more risk than the gradual process.

DR. CHADWICK spoke of the danger of admitting air, and thought the cyst might be immediately filled with a weak solution of carbolic acid or an equivalent preparation, whether the dilatation were, as it might be, of the uterus or vagina or of both.

DR. SINCLAIR said the symptoms in Dr. Winsor's case were evidently

[1] Archiv der Pharmacie, 206, page 403.

due to septicæmia and peritonitis, and that the abdominal tumors mentioned, as distinguished from the uterine tumor, were evidently the effects of peritonitis, by which serous effusions were retained in accidental cavities formed by peritoneal adhesions. Writers say that the contraction of the parts following evacuation of the contents, and the consequent dragging down upon the supports and attachments, with the resulting stretching and even laceration, are the cause of the peritonitis.

Dr. Fifield concurred in this as the only reasonable explanation of the tumors. In ordinary protracted peritonitis one may meet with one or more tumors, fluctuating and perhaps capable of being emptied alternately one into the other by pressure. This was illustrated by a case which he had once seen with Dr. H. J. Bigelow. There were two fluctuating abdominal tumors of which the character was not satisfactorily diagnosticated during life, but which were shown, on post-mortem examination, to consist of a collection of sero-purulent fluid roofed in by adhesions of the intestines to the abdominal peritoneum. The cavity thus formed was subdivided into a large and a small one, and fluid could be passed from one to the other by palpation.

Dr. Winsor replied to questions that the septicæmia seemed to have nothing to do with the tumor. The peritonitis was not general, and the abdomen was not notably tender.

Dr. Chadwick said a tumor occurring subsequently to evacuation of the menstrual accumulation might be peritonitic, but he had never seen the history of a case which showed antecedent peritonitis. Of this there was lack of evidence; periodic abdominal pain being referable to obstructive dysmenorrhœa.

Dr. Sinclair thought it might be difficult to separate the pain of limited peritonitis from the pain of the monthly strife.

Atresia Ani Vaginalis. — Dr. Tuck read the case.[1]

Dr. Tuck remarked that this deformity is described in Förster's Pathological Anatomy, but that it is very rare. Dr. J. B. S. Jackson had never seen such a case.

Dr. Lyman asked as to the propriety of attempting relief in this case by a surgical operation.

Dr. Tuck replied that a prominent surgeon had advised against an operation on the grounds that it would be very difficult to keep the artificial anus from closing up, and that the patient was very comfortable in her present condition.

Abscess of the Labium with Peculiar Symptoms. — Dr. Minot reported the case of a respectable woman, a widow about thirty years old, whom he saw on account of enormous unilateral swelling of the genitals. There was no pain, and there had been no antecedent symptoms. The right side was perfectly normal; the left was very greatly swollen, the nympha resembling in size and even shape the adult human ear, while the labium majus was as large as the fist, and was neither distended, tense, shining, nor tender. The swelling was entirely external. The swollen labium looked like a great scrotum, œdematous, wrinkled, and rose-colored. The next morning the inner surface of the labium was everted, tense, and fluctuating. A puncture was made

[1] See Journal for September 7, 1876, page 283.

which gave exit to half an ounce of dark, stinking matter. No cause could be assigned for the trouble; the disease was not furuncular.

A Knot in the Cord. — Dr. Gilbert reported the case of a healthy woman who miscarried at six months. She had gradually, during twenty-four hours, missed the motions of the child, and during about a week before the labor there were no fœtal sounds nor evidence of life. The delivery was not remarkable except that a knot was found tied in the cord, and had been the evident cause of strangulation of the child. The cord was turgid, and there were signs of decomposition.

Dr. Homans related a case which he had seen three or four months ago. The labor, about five hours in duration, occurred at the end of nine months' gestation, and everything was natural except some special detention of the presenting head at the lower strait. The child was born dead, with the cord tightly drawn about its neck, and all pulsation had stopped. Death in this case was attributable not to the constriction of the child's neck, but to an arrest of the circulation in the cord itself.

Dr. Lyman said that on one or two occasions he had had fear of losing the child in consequence of the position of the cord about its neck, the face becoming more and more livid before the stricture could be relieved, but no serious result had happened.

Forceps versus Turning. — Dr. Fifield stated that he had been interested in the discussion lately going on between Drs. Goodell and Wilson, of Philadelphia, in regard to the question whether to apply the forceps or perform version when the head is at or above the superior strait, having in view the comparative safety of the mother and child. Dr. Fifield had had, during the past fortnight, a case which had brought into consideration the comparative efficacy and safety of the two methods.

On the night of Thursday, May 4th, he was called to a patient, thirty-five years of age, in labor. The os would barely admit the finger. The membranes could be reached, but no presenting part could then be made out. After an hour or two the head, apparently, could be felt, but for still another hour there was no definite presentation. At this stage it was supposed that there might be a cord presenting with the breech, arm, shoulder, or some other unusual part. The pains continued slow and inefficient. Dr. Fifield waited another hour and then ruptured the membranes, and the pains then present disappeared. In order to restore the pains ergot was given, but with very little effect. After a while the head was found to be presenting, and a full examination was made by introducing the hand within the vagina. Dr. Fifield sent for Dr. Blanchard, in consultation, and it was decided either to turn or to apply the forceps at once, and the latter method was elected. The forceps were locked, but the child's head could not be made to advance in the least degree with all the efforts and appliances of the two attendants. Finally, during a strong effort, something appeared to give way suddenly, and the head was ascertained to be against the promontory of the sacrum. It was then found that this sensation was from the impingement against and the retreat from this process. At length the head did not recede, and a dead child was at last delivered. Dr. Fifield remarked that his fortune had been about

alike with the two methods of treatment, having delivered about as many dead children in one way as in the other, under the conditions stated at the beginning.

In reply to questions, Dr. Fifield said he thought the natural efforts were unequal to the task. The woman had already been in labor for some time, and her strength was diminishing. Where there is a disproportion between the head and the pelvis, and especially where the anterior fontanelle is toward the pubes, nature seems to recognize in advance the difficulty of driving the head through, and fails to make the ordinary efforts. Dr. Fifield remarked that Dr. Johnson and the Dublin school had vaunted this great discovery of the possibility of applying the forceps when the os is very little dilated, and observed that the operation had been performed for years in Dorchester. This discovery, if not very great, is a great saving of time and strength and leads to more recoveries.

Dr. Minot inquired why the forceps were applied, the os being as yet only of the size of a quarter of a dollar, the pains feeble, and the pulse good; and asked what would have been the result if Dr. Fifield had waited another twenty-four hours.

Dr. Fifield replied that the pulse was quiet, and the child's face was toward the rectum. In this case there was a curious simulation of the symptoms of flooding, faintness, gasping, calling for air, etc., but it was altogether hysterical.

Dr. Stedman said that the operation referred to by Dr. Fifield had been done time and again in this vicinity, the os yielding before the advancing head in the same manner as when the fœtus is pushed against it. If the face is toward the pubes and the pulse goes up, no one would wait forty-eight hours. As to the choice between the forceps and turning, when the child lay high, there seemed to be none, a dead child being likely to result by either method.

Dr. Fifield, in answer to a question concerning the rate of the pulsations of the fœtal heart, replied that it was not listened to. He remarked that Goodell speaks of Hodge, of Philadelphia, as being able to apply the forceps very dexterously to the sides of the head. Dr. Fifield confessed that he did not see how, when the head is above the brim of the pelvis, the forceps can be applied in any particular way with reference to the position of the head. If the blades are going to lock at all, they take their own course up the pelvic curve.

Dr. Chadwick said that he had talked about forceps with Dr. Goodell, who advocated the application of the blades to the sides of the head in all cases, by which, in Dr. Chadwick's opinion, one loses the benefit of the curve and seems to pull at a disadvantage. Dr. Goodell also advocates pulling, not in the line of traction as indicated by the chord drawn from the grasp of the hand to the tip of the blades, but in the line of pelvic curvature and the general curve of the forceps, which produces the resultant force from the application of both hands to different parts of the handles, the distal hand exercising the direct traction, the other exercising force in a direction more or less downwards. Dr. Chadwick suggested that to this end the lateral curvature of the blades at the

tip should be made to correspond with the direction of the force, that is, that the radii of the curvature should be in the same plane with the actual line of force.

Dr. Fifield thought the method of Dr. Goodell, as detailed by Dr. Chadwick, a mistake. The lateral pendulum shake is also nowadays condemned. The main obstacle is overcome when, by a prying force, the head, rotating upon the promontory of the sacrum as a pivot, is made to slip past the pubes.

Dr. Hodgdon said that he had had very great success in turning. He gave an account of a woman who in her first labor was delivered by craniotomy; in the second case there was the same condition of things as that described by Dr. Fifield. Dr. Hodgdon turned and delivered a living child, and the woman made a good recovery. In several instances of patients whose previous labors had been accomplished by the forceps, the children being stillborn, he had succeeded, by turning, in delivering living children, and from his experience he would decidedy give the preference to the latter method.

Dr. Winsor said that in a certain case of turning he had received great assistance from pressure upon the head by the strong hand of the patient's husband. The child was dead.

Dr. Fifield reported the case of a patient who in her first, second, fourth, and fifth labors was delivered by craniotomy, by different physicians. The third labor was premature. At the sixth labor he turned and delivered a living child.

Sudden Death from Chloroform during Labor. — Dr. Cotting remarked that since he came to this meeting an account of a case of death from chloroform during delivery had been shown him in the last number of the London *Lancet*, and stated that he had himself had, a number of years ago, a case in which death was probably due to the same agent. The patient was a primipara, aged twenty-two. The labor was going on well, and the head was apparently on the point of emerging, when the patient had a slight convulsion. Chloroform was administered, and, the pains returning after a while, the administration was repeated. The head was got away and the uterus was contracting well, when a tremor occurred and the pulse ceased. The patient was dead. At the time of this occurrence there appeared to be no obvious cause of death; since then, as chloroform has been found to be frequently fatal, Dr. Cotting has been more and more of the opinion that death in this case resulted from the use of this anæsthetic.

PETERSEN'S HISTORY OF MEDICINE.[1]

The work before us is a remarkable one which we confidently recommend to those who are interested in the history of medicine. This is a branch of literature that receives comparatively little attention. It is an instructive, but to us an intensely melancholy study; every line suggests the spirit of

[1] *Hauptmomente in der geschichtlichen Entwickelung der medicinischen Therapie.* Von Dr. Julius Petersen. Copenhagen: Andr. Fred. Höst & Sohn. 1877. (Translated into German from the Danish.)

Goethe's Faust, of enthusiastic endeavors, ingenious theorizing, patient working, and, above all, of the hope deferred that maketh the heart sick.

"Oh, happy he who still renews
The hope from error's deeps to rise forever!
That which one does not know, one needs to use;
And what one knows, one uses never."

The work is divided into two chief parts, the former being devoted to the dogmatic tendencies of medicine, and the latter to the empiric and rational empiric systems. The former comprise the various steps of medicine through superstition, quackery, and error. The different kinds of each of these attributes are philosophically separated one from another, and the study of them is made truly interesting to the close reader. As a favorable instance we may mention the passage describing the supposed conflict between life and disease: "Diseases which can only attack matter nevertheless impair the freedom of the spirit, which consequently labors with all its force to expel them, and the struggle is manifested by the symptoms of the illness. . . . . In all fevers one sees clearly the energetic efforts of the vital force. After the entrance of the morbid agent the processes of life spring into increased action; the heart and the pulse beat quicker, the breathing is hastened, the heat increased, the skin becomes red and turgid. How suggestive is this picture of a fight with the intruding foe! At last the condition improves simultaneously with an eruption on the skin, a heavy red deposit in the urine, or a profuse sweat; the conflict is over, the godlike principle of life has triumphed, and the enemy is expelled. The *vis medicatrix* has thus manifested itself in the symptoms." Such views are not yet obsolete even in the profession; since beginning this notice we have received a pamphlet, the writer of which maintains, concerning fever, "that it is always nature's supreme effort to save life and prevent the modification of tissues constituting chronic disease, or organic disease, so called." After discussing the various forms of error, the author comes to the nihilism beyond which he thinks we have now passed. He touches on sanitary medicine, and speaks more hopefully of the future than the nature of the mass of the book would lead us to expect. The author's idea of the physician of the future is what Mr. Pecksniff would call a "prismatically tinged" one. "It is by no means enough for him to study the structure of the human body and its action in healthy and diseased conditions, nor to exercise himself in surgical technique, or in the art of prescribing. The physician must make his way into the thousand fold relations of civilized life, and penetrate to the highest and lowest spheres. He must be familiar with movements of thought and with their mode of development, and must have a clear appreciation of the results and present bearings of the natural sciences. The 'nihil humani a me alienum' applies most fully to him. He must have not only the sharp eye of an observer, but all his moral organization must be highly and harmoniously developed both in respect to the feelings and the reasoning power."

This is all very fine, but who is to take care of the sick while this Daniel Deronda is perfecting his perfection? Or, if he can find time to leave his philosophy, is he the man who can best see to the comfort and welfare of his patient? There is no more difficult question in medical education than what is the proper relation between abstract science and applied empiricism. This book certainly does not solve it, but it gives much food for thought.

DEFRESNE ON PANCREATINE.[1]

A CAREFULLY conducted summary of the physiological action of the pancreatic juice precedes the consideration of its remedial use in impaired digestion. This summary presents a very clear account of our present physiological knowledge of the subject, which it is hardly worth our while to repeat in this short notice of M. Defresne's *brochure*. Assuming that pancreatic juice, apart from its property of reducing fats to the condition of an emulsion and of decomposing fat globules into glycerine and fatty acids, has also the power of digesting albuminoid substances, M. Defresne asserts that his experiments prove that this digestion is retarded by the presence of free acid, and is assisted by the presence of a weak alkali. Thus, if the chyme coming from the pyloric orifice contains an excess of the acid belonging to gastric juice, or of the acids set free from alimentary substances, the further digestion of albumen by the pancreatic juice is thereby hindered. Upon this physiological fact he bases the therapeutical uses of prepared pancreatine.

M. Defresne extracts pancreatine in the following manner: Fresh pancreas is bruised and placed with ether in a vessel, and then carefully subjected to a temperature of 45° C. (113° F.) for twenty-four hours. The floating portions are skimmed off, and the fluid residue is evaporated by a strong current of air heated to a temperature of 40° C. (104° F.); this evaporation should be concluded in one hour.

Pancreatine thus obtained is a yellowish powder and has a fresh animal taste. Its solution in water is viscid. Alcohol will precipitate the pancreatine from the aqueous solution; this precipitate contains the active principle of the ferment, whilst the alcoholic solution has none of its digestive properties. Pancreatine loses its active properties at a temperature of 70° C. (158° F.). Strong acids and alkalies also injure pancreatine in solution, whilst dilute acid and weak alkalies only temporarily affect it.

Speaking of the elixirs of pancreatine, M. Defresne states that tannin is precipitated by albumen, whilst the pancreatine is precipitated by alcohol. Thus a vinous elixir containing tannin precipitates the albuminous substance, especially if it contains more than eight per cent. of alcohol. However, an elixir of pancreatine which contained only eight per cent. of alcohol was prepared by M. Defresne, and preserved its digestive properties for a year and more. His elixir is made according to the following formula: —

Pancreatine	4	grammes.
Dry white wine	120	"
Crystallized sugar	175	"
Tincture of coffee.	10	"

Each teaspoonful contains 0.25 of pancreatine. His emulsion of pancreatine and cod-liver oil is made as follows: —

[1] *Recherches expérimentales sur le Rôle physiologique et thérapeutique de la Pancréatine.* Par TH. DEFRESNE, Pharmacien de première Classe, etc., etc. Paris: A. Delahaye. 1875.
Experimental Investigation on the Physiological and Therapeutical Action of Pancreatine. By TH. DEFRESNE. Paris: A. Delahaye. 1875.

Cod-liver oil	1000 grammes.
Pulverized pancreatine	40 "
Simple syrup	300 "

Digest and shake frequently for twenty-four hours, and add cherry-laurel water 9.50 grammes.

His pills are made after the following prescription: —

Pancreatine	4.00 grammes.
Honey	.50 "
Simple powder	q. s.

Mix and divide into twenty pills; two or three pills at a dose.

With regard to its therapeutical action, M. Defresne's theory may be thus expressed: Bile has the effect of reducing fat to the form of emulsion, and the pancreatic juice reduces the further decomposition of emulsified fat — as for instance, oleate, margarate and stearate of glycerine — to a more simple form similar to the molecular association of carbon and hydrogen, thus favoring the easy development of animal heat. Those diseases which seem to be the outgrowth or the cause of loss of tissue nutrition may be benefited by the therapeutical use of arsenic, alcohol, digitalis, which retard circulation and tissue metamorphosis; but the use of fats and their further digestion and decomposition by the artificial administration of pancreatine add simple materials whose combination promotes animal heat without calling upon the fat already stored up as tissue, and thus facilitates constructive metamorphosis.

We would like, if space were allowed, to discourse more at length in regard to the observation suggested by our author: that the presence of too much acid in the chyme, proceeding either from the gastric juice or from the fermentation of food in the stomach, will prevent the action of pancreatic juice in the digestion of fats, and hence will produce obstinate dyspepsia unless fatty food be abstained from. A discussion of this part of his argument would give the indications for the proper time of administering the pancreatic ferment. A.

ATHLETIC SPORTS.

THE recent action of the commissioners of licenses in prohibiting all wrestling and sparring matches in this city might be looked upon as a suggestive comment upon the tendency of many athletic sports at the present time. The immediate cause of this action was the death of a young man immediately after the conclusion of a contest with "Liverpool gloves," which took place last week. In the present case the contest partook so largely of all the characteristics of a prize-fight that the action of the commissioners seems eminently proper. We feel, however, that the innocent have been made to suffer with the guilty by including the wrestling exhibitions, which have lately become so fashionable, under the same ban. The "Græco-Roman" encounters are undoubtedly not without danger, even when the participants are professional. Other methods of wrestling have less objectionable features, and the sport possesses all the attractions of a reality without any of the brutalizing characteristics of the ring.

While, therefore, we should regret to see any legislation tending to discourage athletic sports, we are glad of an opportunity to sound a note of warning against an indiscriminate participation in many of the games which are now rapidly becoming popular.

Until within late years there were few countries which gave so little encouragement to the various forms of open-air exercise as our own. The innumerable games in which the Englishman is proficient were either unknown or despised by the young man who had outgrown his school-days. This apathy regarding physical development has given way to the influence exerted chiefly by our university youth, among whom athletic sports, games of all kinds, boating and racing, prevail to an extent that would have been thought hardly possible a few years ago. Every new season brings with it some new importation. Schools are feeling the influence of this movement, and physical training is assuming a prominence in the education of our youth proportionate to its importance. Running to extremes, as we are apt to do in this country, it is to be feared that too much license may be permitted in these apparently more harmless sports as well as in those which are the property of professionals. The game of foot-ball, for instance, would seem as innocent an amusement as could well be devised, but, as at present played under the Rugby rules, affords as little protection to the participant as the "Liverpool gloves." Our English exchanges have within the last year or two pointed out the dangers of this game. There have been several fatal accidents in the foot-ball field, and the number of broken arms, legs, and collar-bones has grown alarmingly great. We know of quite a number of young men in this city who are now convalescing from injuries received during the autumn. A set of rules originally designed for small boys has been used indiscriminately by light and heavy weights. The game as now played would seem to combine all the dangerous features of sparring, wrestling, and the French method of friendly combat, kicking. We would urgently warn parents against the dangers of this game, which has crept amongst us like a wolf in sheep's clothing. We trust that no vicious rules will render unpopular any of those sports which are becoming so desirable a feature of college and school life.

MEDICAL NOTES.

— We make the following quotation from the message of the governor of Massachusetts, showing him to be fully in sympathy with the views expressed in a recent number of the JOURNAL. The matter having been thus formally brought to the notice of the legislature, we may indulge in the hope that active steps towards reform in our coroner system may soon be taken.

"I desire to call your attention to some needed changes in the statute respecting the appointment and the powers and duties of coroners. At present the number who may be appointed is unlimited, and has been extended far beyond reason or necessity, and has sometimes included persons incompetent and unfit for the legitimate duties of that office.

"In London there are but four coroners; in New York, four, and four assist-

ants. In Brooklyn, Philadelphia, New Orleans, and Chicago, two each; in Baltimore, Washington, Cincinnati, and San Francisco, one each, making a total of twenty-four; while in Boston alone there are forty-three, and in Suffolk County forty-seven. The powers and duties vested in coroners are highly important, and their abuse frequent and dangerous. They embrace both the functions of physician and judge, and it is said that even the verdicts of juries are sometimes framed by the coroner himself. No process of removal of an unfit coroner now exists, excepting by address of both houses of the legislature to the governor and council, and this is impossible during a large portion of the year."

— The library of the late Professor Traube, Berlin, consisting of 4042 numbers, or about eight thousand volumes, has been catalogued by Hirschwald, and is offered for sale. Among the journals are *Annalen d. Charité* from 1850 to 1870; Virchow's *Archiv f. patholog. Anatomie u. Physiologie* from 1847 to 1876, entirely complete; Canstatt's *Jahresbericht d. gesammten Medicin*, from 1842 to 1876; Schmidt's *Jahrbücher d. in- u. ausländ. gesammten Medicin*, from 1834 to 1875; and *Transactions of the Pathological Society of London* from 1847 to 1875, which last is nowhere so complete.

— An unusual interest has been created over the successor of the late Professor Simon, of Heidelberg. A semi-official telegram from Stuttgart early in October announced Professor Lücke, of Strasburg, as most likely to take the vacancy. It is, however, authoritatively denied, and Professor Czerni, of Freiburg, Baden, has accepted the call, and has already entered upon the duties of the chair.

— *The Clinic* appears in new and improved form, and in future will be conducted by Dr. Roberts Bartholow, editor in chief, and Dr. James G. Hyndman, managing editor.

— The Hunterian Oration recently delivered by Dr. Sutton and published in the *Medical Times and Gazette* of December 2, 1876, is something more than a restatement of Hunter's life and work. Referring to the object of the Hunterian Society, the orator says, "The society could much more easily erect 'a tardy monument to buried dust,' could delineate the character of the man, and devotedly describe his work, but devotion which does not multiply exertion is not a high attribute. We shall doubtless, therefore, all agree that the original founders of this Oration wisely intended that the orator should endeavor to search beyond generally accepted opinions, and in so doing exemplify that the spirit of the great dies not, that the power transmitted by a great mind like Hunter's is not only accumulative but illimitably reproductive. It is a great road-maker into the unknown."

Dr. Sutton holds that "the doctrine of man's assumed independence of, and abrupt limitation from his surroundings is untrue; our belief in it is founded on insufficient observation, and derived from too restricted reasoning. Yet on this received belief of human independence is based the present doctrine of human responsibility. And the belief acts injuriously, for it prevents persons searching to find out the causes of human conduct, good and injurious." He further attempts to show that "the moral and physical are inseparable and correlated, that abnormality in the physical necessitates aberration in the

moral, that healthy feeling and right doing, disorderly feeling and wrong doing, are related as cause and effect."

If it be objected that man's sense of his responsibility must be diminished and evil doing promoted by the belief that feeling, not knowledge of right and wrong, chiefly governs conduct, the orator asks whether the opposite teaching has sufficiently prevented evil doing. After inviting the attention of those who take an opposite view to the doctrines he has advanced, Dr. Sutton concludes with the expression of his belief that his observations will have been useful if they enlist the attention of members of the profession, who have very many opportunities of showing persons that their feeling must be healthy if they would act rightly. . . . "We perhaps cannot sufficiently teach," says he, "that it is not enough to educate persons, in the ordinary sense of the word, make them intelligent and know much; their feelings also must be trained healthily if they are to act properly." That is all, no doubt, but how, according to Dr. Sutton, is it to be done?

— In a suit for libel recently tried in England the defendant, *The Medical Press and Circular*, was fined fifty pounds and costs. The offense of this journal was a denunciation against the course of a Mr. Betts, who published a circular offering his advice, with medicine, for the low fee of fourpence. *The Medical Press and Circular*, having seen the handbill of Mr. Betts, naturally regarded it as derogatory to the profession, "and," says *The Medical Examiner*, "in the course of some indignant remarks asserted that good medicines could not be supplied at that price at a profit, winding up — perhaps unfortunately — with the word 'dodge.' Demand for retractation having been refused, the action was brought, with the result stated. Dr. Jacob, the writer of the article, and chief editor of the journal, appeared in court, and testified that he had no personal knowledge of the plaintiff, and wrote solely out of consideration for the good of the profession and the public. He testified, too, to his honest belief that valuable medicines could not be retailed at a commercial profit on such terms, and spoke of hospitals where he knew the drugs to be a heavier item of the expense. Other evidence was also tendered to show that hospitals expended more than fourpence per case on drugs. But in spite of this, and of the eloquence of the counsel, the jury decided against our contemporary, and so, we presume, it may be considered dangerous to declare that no one can profitably practice medicine at rates which nearly all medical men find to be impossible."

MASSACHUSETTS GENERAL HOSPITAL.

MEDICAL CASES OF DR. MINOT.

Hemiplegia; Nearly Complete Recovery. — Mary A., ladies' hair-dresser, forty years old, entered the hospital March 16, 1876. Her health was always delicate; she had been married twenty years, had one child nineteen years ago, and was confined a second time three weeks before her entrance, at the Boston Lying-in Hospital. Child living and healthy.

After having complained for several days of severe pain in the back part of the head and neck, she was seized quite suddenly, on March 12th, with complete loss of power in the left arm and leg, without loss of sensation. On entrance there was some slight movement about the left shoulder, and she could draw up the left leg a little, slowly. Sensation and reflex action of the arm and leg were normal. The left side of the face was paralyzed, and the tongue was pushed towards the left when protruded. There was no paralysis about the eyes or eyelids. The speech was slow and somewhat embarrassed; no difficulty in swallowing; no paralysis of sphincters. There were no cardiac murmurs. The pain in the back of the head continued for several days after her entrance.

She improved slowly at first, afterwards more rapidly. On April 3d she could walk a few steps without assistance; on the 7th she walked about the ward with the assistance of one person, and on the 14th without any assistance. The arm recovered much more slowly; on March 29th there was scarcely any movement of the limb, but May 22d, when she was discharged, it had gained a good deal. She continued to improve, and when last seen, December 19th, she was out and about, and had very good use of the arm. There was still some facial paralysis.

The treatment was expectant, but electricity was employed.

Paralysis of Syphilitic Origin. — Alexander T., thirty-eight years old, widower, shoemaker, entered the hospital April 20, 1876. He had been subject to no particular exposure, and was of temperate habits. Fifteen years before he had had a chancre, followed by secondary symptoms. He had been quite well up to four weeks before entrance, when, after getting his feet wet, numbness and weakness came on in his legs and arms, obliging him to give up work, although he was able to be about. He gradually became weaker, and the day before his entrance he entirely lost the use of the left leg and arm, and also, to a much less degree, of the limbs of the right side. No loss of sensation; some difficulty in speech, and twitching in left arm; no trouble in bladder or rectum; no cough.

The tongue was protruded straight. The mouth was drawn to the right side when the patient smiled. There was no difficulty in chewing, but the movements of the tongue were a little awkward. The eyes closed equally well. Sensation perfect everywhere. No pain in head. The patient had no power over the left hand, fingers, or fore-arm, but he could raise the arm from the shoulder. He was unable to stand or to walk, but could raise the left limb while sitting in a chair. He said he had been troubled with vertigo for years.

He was treated by the biniodide of mercury with iodide of potassium, by pulvis ferri, and by electricity. A good diet was allowed. The power of the left leg and arm returned rapidly, and when he left the hospital, June 14th, he was nearly well.

Pleurisy; Paracentesis; Recovery. — Charles H., hair-dresser, thirty-eight years old, married, entered the hospital March 22d. He had "lung fever" three years ago, and has not been well since. Two weeks ago, without known cause, he was seized with chills, fever, headache, cough, slight whitish expecto-

ration, and considerable dyspnœa. At entrance he was prostrated, without appetite, constipated, and was unable to lie on the right side on account of pain. The tongue was dry and brown. Pulse 94; temperature 99.2°; respiration 38. There was dullness on percussion throughout the right chest, but some respiration could be heard in the upper part.

There being no improvement in the symptoms, the patient was tapped, March 29th, and two and a half quarts of clear serum were drawn off. The dullness in the back immediately gave way to resonance. Bronchial respiration was heard in the lower two thirds of the back, and vesicular respiration in the upper third. He was relieved of his dyspnœa, and improved daily. He was discharged, April 11th, in a very satisfactory condition, the difference in percussion between the two sides having disappeared in front, though evident behind; the respiration was also fair on the affected side, and there was no dyspnœa.

Empyema; Treatment by Drainage; Recovery. — William W., a laborer, of temperate habits, was always much exposed to weather, but never had a sick day in his life until twelve weeks before his entrance into the hospital, which was on the 26th of May, 1876, when after getting wet and chilled, febrile symptoms came on, with "catching pains" in the left side, cough, slight expectoration of frothy matter, and some dyspnœa. He kept about his work for two weeks, and was then obliged to give up and take to his bed, to which he was confined until he entered the hospital. The cough increased for six weeks previous to his entrance, and the expectoration became profuse and mucopurulent. The dyspnœa also somewhat increased, and he lost flesh and strength rapidly. There was some swelling of the feet. Appetite good; sleep poor; bowels regular. Pulse 106; temperature 99°; respiration 40.

The impulse of the heart was felt below the xiphoid cartilage; sounds loudest an inch to the right of sternum, at level of fourth rib. There was complete flatness on percussion, and absence of vocal fremitus, in every part of the left chest, front, back, and side. No respiration was to be heard in any part of the left chest, except just below the clavicle, where there was distant bronchial respiration and abundant moist crepitation; also between the scapula and spine, on the left side, the respiration was tubular, with some crackling. The same side was somewhat dilated (to the eye), and the intercostal spaces were obliterated. No râles were heard anywhere on the right side. There was abundant expectoration of thick, greenish matter; considerable emaciation; fingers clubbed.

The chest was tapped May 27th, and two quarts of inodorous pus were withdrawn by means of Bowditch and Wyman's syringe. June 1st an opening was made four inches below the angle of the left scapula, and a drainage tube was put in. The chest was washed out twice daily with a weak solution of carbolic acid. The cough immediately diminished, the pulse daily became slower, and the patient was up and dressed. The discharge having nearly ceased, the tube was removed June 20th, and the opening healed in two days, when the patient was able to go home, "much relieved," July 6th. There was only partial expansion of the lung at the time he left the hospital. The heart had returned to the left side, but there was dullness on percussion and absence of

respiration in the lower half of that side. There was a decided curvature of the spine, with concavity to the left. His general condition was very satisfactory. A few weeks later he was heard from as "well," and at work.

Chronic Gastric Ulcer. — Mary W., aged forty-six years, widow, entered the hospital March 20, 1876. She has had eight children and three miscarriages. She was always healthy and strong up to one year ago, when she began to have pain in the epigastrium, with nausea, headache, eructations of gas, vomiting of food, and on several occasions vomiting of blood, but the latter was not copious. The pain came on chiefly about five or ten minutes after eating. She had kept her bed most of the time for the previous two or three months, had lived almost wholly on gruel, and had lost much flesh and strength. The catamenia ceased a year ago. The bowels were costive; sleep poor; temperature and pulse normal. There was considerable general tenderness in the epigastrium, most marked below the xiphoid cartilage. Tongue moist, with thin, brown coat.

She was put upon a careful regimen of milk, beef-tea, and bits of ice, with lacto-peptine, bismuth, and mild laxatives. Under this treatment she improved rapidly, and left the hospital, April 7th, "much relieved."

THE METRIC SYSTEM IN PRESCRIPTIONS.

Messrs. Editors, — The article by Dr. A. N. Blodgett in the number of the Journal for December 21st shows some of the difficulties which will have to be encountered in introducing this system for use in prescribing. From the pharmacist's point of view there are also some difficulties which should be obviated if possible. The apothecary wishes to know exactly what quantities the physician intends. Dr. Blodgett states that "the druggist is expected to know how to dispense the articles without the special signs gmm. or c. c., and to understand solids as prescribed in grammes and liquids in cubic centimetres." Another Boston physician, one who has had considerable experience in the hospitals of Europe, understands that all quantities of liquids expressed in the metric system, with figures simply, mean grammes by weight; that he is accustomed to expressing quantities in his prescriptions in the metric system, and has supposed that all the substances were weighed, liquids as well as solids. Articles have recently appeared in some of the New York medical journals which seem to indicate that the intention of prescribers is to have everything weighed.

This diversity of opinion is mentioned to show that it would be well if there could be a distinct understanding as to what is meant by the figures when used without the special signs gmm. or c. c.

It would seem to be much easier for the physician to prescribe liquids by measure than by weight; it would certainly be much easier for the pharmacist to dispense them so. Until concerted action can be established, by the medical societies or otherwise, it would relieve the pharmacist of doubt if the special signs gmm. should be used to indicate quantities by weight and c. c. to indicate quantities by measure.

A TABLE FOR REDUCING TROY WEIGHT TO GRAMMES.				TABLE FOR REDUCING FLUID MEASURE TO CUBIC CENTIMETRES.		
Troy Weights.	Gramme Weights.	Troy Weights.	Gramme Weights.	Fluid Measure.		Cubic Centimetres.
Grain $\frac{1}{10}$	.006	Grains 80	5.18	Fluid Drachm	$\frac{1}{2}$	1.84
" $\frac{1}{8}$	.008	" 90	5.83	"	1	3.69
" $\frac{1}{6}$	.011	" 96	6.22	"	$1\frac{1}{2}$	5.53
" $\frac{1}{4}$	.016	" 100	6.48	"	2	7.38
" $\frac{1}{3}$	.022	" 120	7.75	"	$2\frac{1}{2}$	9.22
" $\frac{1}{2}$	.032	" 150	9.72	"	3	11.07
" 1	.065	" 160	10.37	"	4	14.76
" 2	.13	" 180	11.66	"	5	18.4
" 3	.19	" 200	12.96	"	6	22.1
" 4	.26	" 240	15.55	"	7	25.8
" 5	.32	Drachms 6	23.3	Fluid Ounce	1	29.5
" 6	.39	" 8	31.1	"	$1\frac{1}{2}$	44.3
" 8	.52	" 10	38.9	"	2	59.
" 10	.65	" 12	46.6	"	3	89.
" 12	.78	" 14	54.4	"	4	118.
" 15	.97	" 16	62.2	"	6	177.
" 16	1.04	" 20	77.7	"	8	236.
" 18	1.17	" 24	93.	"	10	295.
" 20	1.29	Ounces 4	124.	"	12	354.
" 24	1.55	" 5	155.	"	16	472.
" 30	1.94	" 6	186.	"	20	591.
" 36	2.33	" 7	217.	"	24	709.
" 40	2.59	" 8	248.	"	30	886.
" 50	3.24	" 9	279.	"	32	944.
" 60	3.89	" 10	311.			

For the convenience of those who wish to become more familiar with the equivalents in the metric system of quantities in common use in prescriptions in the old system, the accompanying table is appended. This table has been prepared by Messrs. T. Metcalf & Co., and copies of it will be freely furnished by them.

THOMAS DOLIBER.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING DECEMBER 30, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	473	23.18	29.35
Philadelphia	825,594	318	20.03	22.24
Brooklyn .	506,233	190	19.52	24.92
Chicago .	420,000	178	22.04	19.75
Boston . .	352,758	146	21.52	26 20
Providence	101,500	24	12.29	19.02
Worcester .	51,087	17	17.30	20.91
Lowell . .	51,639	20	20.14	20.55
Cambridge	49,670	13	13.61	23.31
Fall River	50,372	14	14.45	23.99
Lawrence .	36,240	1	24.39	25.96
Lynn .	33,548	1	20.15	19.23
Springfield	32,000	8	13.00	20.93
Salem . .	26,344	9	17.76	22.92

Normal Death-Rate, 17 per 1000.

Obituary. — At an adjourned meeting of the Middlesex East District Medical Society, held at Winchester December 28, 1876, the following resolutions were offered: —

Resolved, Having by the death of Dr. Alonzo Chapin, of Winchester, lost our oldest member, and one whom we all honor and sadly miss, we wish to express our deep sense of his kindliness of heart, his manly uprightness and energy, and his honorable and faithful discharge of his professional duties, both to his patients and to his medical brethren.

He will long be regretted in his church and in his town, but nowhere, outside of his own family, will he be so missed as by us his fellows and friends of the Middlesex East District Medical Society. We most sincerely assure his family of our sympathy. In view of their sacred sorrow it becomes us to use few and simple words, but these come from our hearts. May the God whom he trusted and served support them.

Resolved, That a copy of these resolutions be sent to the family of the deceased, the Boston Medical and Surgical Journal, and the *Woburn Journal*.

J. Richmond Barss, *Secretary*.

THE METRICAL SYSTEM IN PRESCRIPTIONS.

Messrs. Editors, — The readable paper by Dr. Blodgett, which appeared in the last issue of the Journal, tempts me to call the attention of physicians to a little book to be had of B. Westermann & Co., of whom I bought a copy a year ago (price sixty cents, gold).

Without attempting to review it, I hereby give the title,[1] which shows pretty well what the character of the book is.

The formulæ are written according to the decimal system, which has been recently adopted throughout the German Empire, and they are of great assistance to the prescriber who wishes to write his prescriptions in accordance with this system.

Incidentally, it should be stated that new remedies, as *chloratum hydratum*, *eucalyptus globulus*, etc., are mentioned.

If this little hand-book should be translated, it would seem as if, at the present time, it would have a ready sale. Respectfully, David Coggin.

Salem, *December* 26, 1876.

The next regular meeting of the Boston Society for Medical Observation will be held on Monday evening next, at eight o'clock, at its rooms No. 36 Temple Place. Dr. Forster will report a case of dysentery.

Books and Pamphlets Received. — Illustrations of Clinical Surgery, consisting of Plates, Photographs, Wood-Cuts, Diagrams, etc., with Descriptive Letterpress. Fasciculus V. By Jonathan Hutchinson, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1876. (From A. Williams & Co.)

Twenty-First Annual Report of the Trustees of the State Lunatic Hospital at Northampton. October, 1876. Pp. 95. Boston. 1877.

Biennial Report of the Officers of the Vermont Asylum for the Insane for the Two Years ending August 1, 1876.

Transactions of the Thirty-First Annual Meeting of the Ohio State Medical Society, held at Put-In-Bay, June, 1876. Cincinnati. 1876. Pp. 221.

The Urine in Disease. Rules for Analysis, Pathological Conditions and their Significance. By F. M. Blodgett, M. D. Harv. A Chart for Physicians' and Students' Use. Boston: James Campbell.

A Note of Warning. Lessons to be learned from the Cholera Facts of the Past Year and from recent Cholera Literature. By Ely McClellan, M. D., Surgeon United States Army. Louisville, Ky. Pp. 45. 1876.

[1] Klinische Pharmacopœe. Die gebraüchlichen Arzneimittel der deutschen Medicin, ihre Wirkung und Anwendung, nebst 400 beliebten Receptformeln für innere und äussere Krankheiten. Von Dr. Fred. Wilhelm Müller. Stuttgart. 1875. Pp. 128.

Fig. 1.

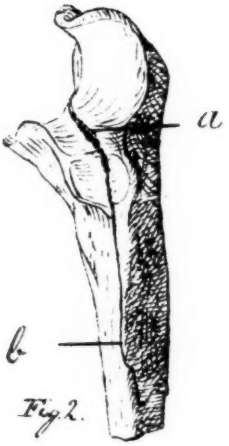

Fig. 2.

Fig. 3.

Fig. 6.

Fig. 4.

Fig. 5.

Fig. 7.